

Fig.1.

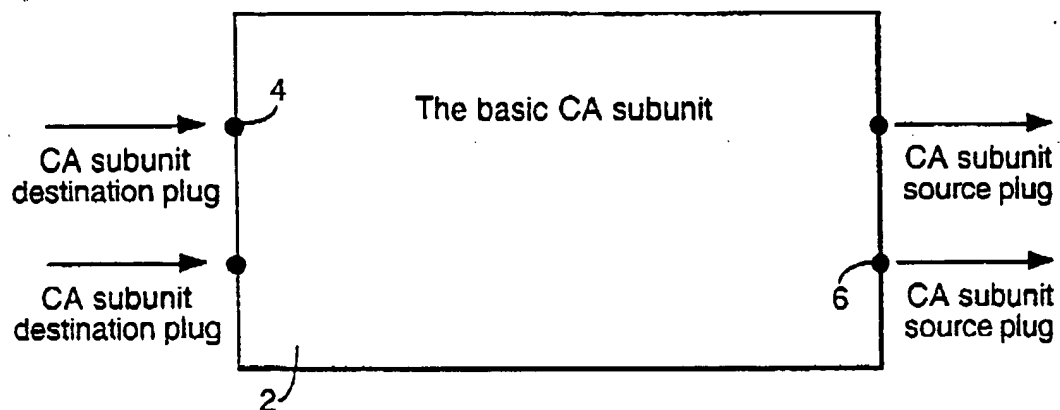
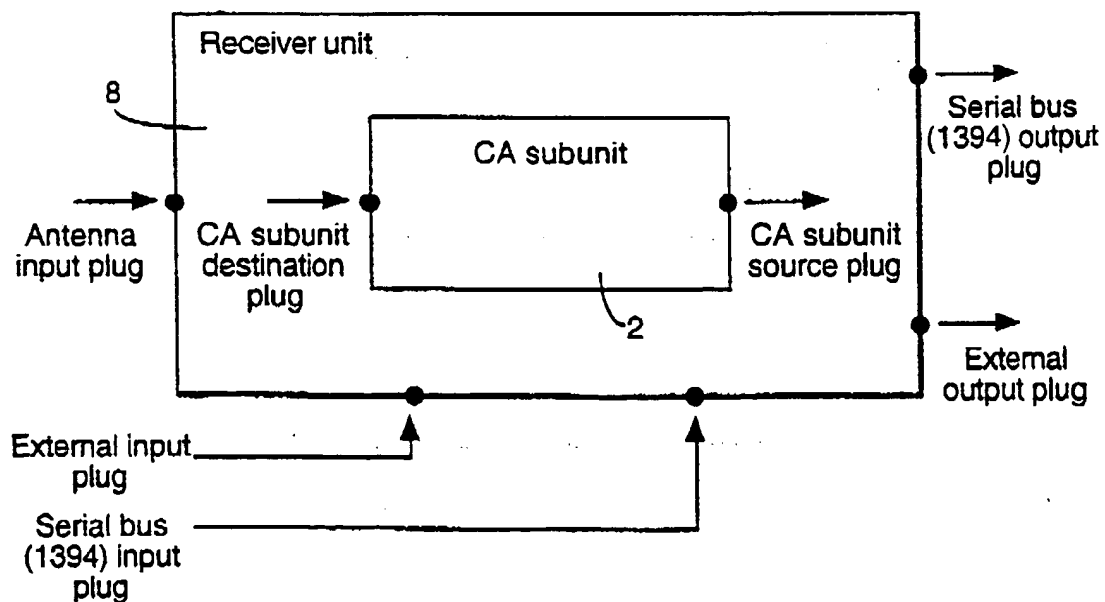


Fig.2.



2/15

Fig.3.

Address offset	msb	lsb
0016	CA_subunit_dependent_info_fields_length	
0116		
0216	CA_subunit_version	
0316	number_of_systems [n]	
0416	system_specification[0]	
:		
:		
:	system_specification[n-1]	
:		
:	optional info blocks for future expansion	
:		
:		

Fig.4.

Address offset	msb	lsb
0016	specification_length	
0116		
0216	system_id	
0316	implementation_profile_id	
0416	number_of_CA_system_ids(m)	
0516	CA_system_id_length[0]	
:	CA_system_id[0]	
:		
:		
:	:	
:	CA_system_id_length[m-1]	
:		
:	CA_system_id[m-1]	
:		

Fig.5(a).

Address offset	msb	lsb
00 0016	descriptor_length	
00 0116		
00 0216	general_CA_subunit_status_info_block	
:		
:		
:	source_plug_status_area_info_block	
:		
:		

Fig.5(b).

Address offset	msb	lsb
00 0016	compound_length	
00 0116		
00 0216	info_block_type=90 0016(general_CA_subunit_status_area_info_block)	
00 0316		
00 0416		
00 0516	primary_field_length	
00 0616		
00 0716	reserved	
00 0816		
00 0916	available_bandwidth_upper	
00 1016		
00 1116	available_bandwidth_lower	
00 1216		

5/15

Fig.5(c).

Address offset	msb	lsb
0016	compound_length	
0116		
0216	info_block_type=90 0116(source_plug_status_area_info_block)	
0316		
0416	primary_fields_length	
0516		
0616	number_of_source_plugs (n)	
0716		
:	nested plug_status_info_block structures	
:		

6/15

Fig.5(d).

Address offset	msb	lsb
00 0016	compound_length	
00 0116		
00 0216	info_block_type=90 0216(plug_status_info_block)	
00 0316		
00 0416	primary_fields_length	
00 0516		
00 0616	source_plug	
00 0716	destination_plug	
00 0816	status	

7/15

Fig. 6.

Opcode	Value	ctype			Comments
		C	S	N	
CA_ENABLE	CC16	✓	✓	✓	Used to instruct the CA subunit to begin descrambling the service defined in the broadcast specific data
CA_ENTITLEMENT	CD16	—	✓	✓	Used to allow a controller to query the CA subunit to determine whether the user has entitlement for a specified service
SECURITY	OF16	✓	✓	✓	Used for validation purposes between a controller and the CA subunit

Fig. 7(a).

	msb								lsb
opcode									
operand[0]									
operand[1]									
:									
:									

Fig.7(b).

msb										lsb
operand [1]	action									
operand [2]	FF16									
operand [3]	service_id									
operand [4]										
operand [5]	number_of_elementary_PID_definitions[m]									
operand [6]										
operand [7]										
operand [8]										
:	elementary_PID_definition[1]									
operand [x]										
operand [x+1]										
operand [x+2]										

Fig.7(c).

msb										lsb
operand [x]	stream_type									
operand [x+1]	elementary_PID									
operand [x+2]										

9/15

Fig.8(a).

msb	lsb
opcode	CA-ENABLE (CC16)
operand [0]	system_id
operand [1]	broadcast_system_specific_data
:	
:	

Fig.8(b).

msb	lsb
operand [1]	action
operand [2]	status
operand [3]	service_id
operand [4]	number_of_elementary_PID_definitions[m]
operand [5]	
operand [6]	
operand [7]	elementary_PID_definition[1]
operand [8]	:
:	
:	
operand [x]	elementary_PID_definition[m-1]
operand [x+1]	
operand [x+2]	

10/15

Fig.9.

msb		lsb
operand [1]	action	
operand [2]	FF16	
operand [3]	service_id	
operand [4]		
operand [5]	number_of_elementary_PID_definitions[m]	
operand [6]		
operand [7]	elementary_PID_definition[1]	
operand [8]		
:	:	
operand [x]		
operand [x+1]	elementary_PID_definition[m-1]	
operand [x+2]		

11/15

Fig.10.

msb	lsb
operand [1]	action
operand [2]	status
operand [3]	service_id
operand [4]	
operand [5]	number_of_elementary_PID_definitions[m]
operand [6]	
operand [7]	elementary_PID_definition{1}
operand [8]	
:	:
operand [x]	
operand [x+1]	elementary_PID_definition[m-1]
operand [x+2]	

12/15

Fig.11(a).

msb	lsb
opcode	CA_ENTITLEMENT (CD16)
operand [0]	system_id
operand {1}	broadcast_system_specific_data
:	
:	

Fig.11(b).

msb	lsb
operand {1}	network_id
operand [2]	
operand [3]	original_network_id
operand [4]	
operand [5]	transport_stream_id
operand [6]	
operand [7]	service_id
operand [8]	
operand [9]	event_id
operand [10]	
operand {11}	FF16

13/15

Fig.12(a).

	msb										lsb
opcode	CA ENTITLEMENT (CD16)										
operand [0]	system_id										
operand [1]	broadcast_system_specific_data										
:											
:											

Fig.12(b).

	msb										lsb
operand [1]	network_id										
operand [2]	original_network_id										
operand [3]											
operand [4]	transport_stream_id										
operand [5]											
operand [6]	service_id										
operand [7]											
operand [8]	event_id										
operand [9]											
operand [10]	entitlement_status										
operand [11]											

Fig.13.

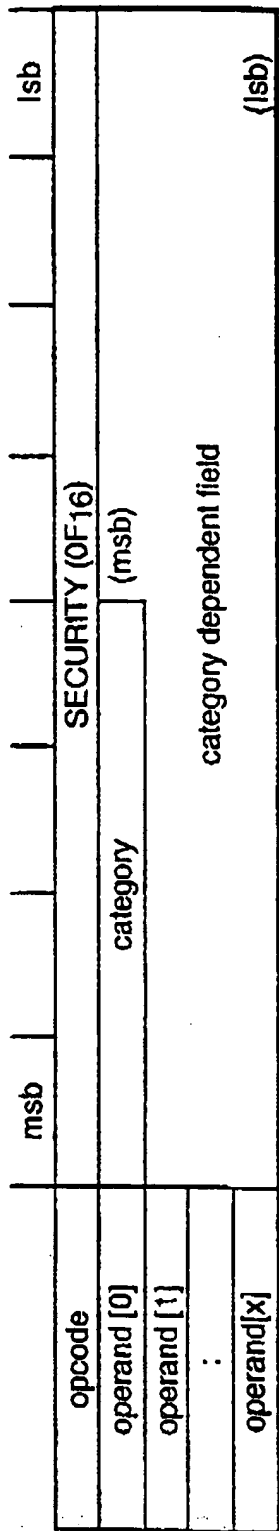


Fig.15.

